What is claimed is:

1. An optical glass having;

a refractive index (n_d) and an Abbe number (ν_d) which are within an area surrounded by straight lines that are drawn by connecting point A (n_d=1.835, ν_d=46.5), point B (n_d=1.90, ν_d=40.0), point C, (n_d=1.90, ν_d=35.0) and point D (n_d=1.835, ν_d=38.0) in a sequence of A, B, C, D and A as border lines in x-y orthogonal coordinates shown in FIG. 1, in which X-axis is the Abbe number (ν_d) and Y-axis is the refractive index (n_d), the area including the border lines: and the optical glass comprising:

0.1 to 8 mass% of SiO_2;

5 to less than 20 mass% of B_2O_3;

15 to 50 mass% of La_2O_3;

0.1 to 30 mass% Gd_2O_3,

0 to 10 mass% of GeO_2 and

0 to 8 mass% of Nb_2O_5,

where a total content of Gd_2O_3, GeO_2 and Nb_2O_5 is more than 10 mass% to 30 mass%;

0 to 5 mass% of Yb_2O_3;

0 to 1 mass% of TiO_2;

0 to 8 mass% of ZrO_2;

more than 10 to 25 mass% of Ta_2O_5;

0 to 10 mass% of WO_3;

0 to 15 mass% of ZnO;

0 to 5 mass% of RO,

where RO is one or more kinds of oxides selected from CaO, SrO and BaO;

more than 0.5 to less than 3 mass% of Li_2O;

0 to 1 mass% of Sb_2O_3; and

0.1 to 6 mass% in a the total content of fluorides of above-described metal elements as F element with which a part or all of one or more kinds of oxides of above-described metal elements are substituted;

wherein the optical glass is free from cadmium, thorium, Y_2O_3, P_2O_5, and TeO_2, and

the optical glass has a transition temperature (Tg) of 550 to 650°C.

2. The optical glass as claimed in claim 1, comprising 0.1 to less than 5.5 mass% of SiO_2.

3. The optical glass as claimed in claim 1, comprising more than 1 to less than 3 mass% of Li_2O.

4. The optical glass as claimed in claim 1, having the refractive index (n_d) of less than 1.875.

5. The optical glass as claimed in claim 1, having the refractive index (n_d) of 1.875 or more.

6. The optical glass as claimed in claim 1,

having the refractive index (n_d) of more than 1.85.

7. The optical glass as claimed in claim 1, having the Abbe number (ν_d) of less than 39.5.

8. The optical glass as claimed in claim 1, having the Abbe number (ν_d) of 39.5 or more.

9. The optical glass as claimed in claim 1, having the transition temperature (Tg) of 640°C or less.

10. The optical glass as claimed in claim 1, having the transition temperature (Tg) of 630°C or less.

11. The optical glass as claimed in claim 2, comprising more than 1 to less than 3 mass% of Li_2O.

12. The optical glass as claimed in claim 4, having the Abbe number (ν_d) of 39.5 or more.

13. The optical glass as claimed in claim 12, having the refractive index (n_d) of more than 1.85.

14. The optical glass as claimed in claim 5, having the Abbe number (ν_d) of less than 39.5.

15. An optical glass having;

a refractive index (n_d) and an Abbe number (ν_d) which are within an area surrounded by straight lines that are drawn by connecting point A (n_d=1.835, ν_d=46.5), point B (n_d=1.90, ν_d=40.0), point C, (n_d=1.90, ν_d=35.0) and point D (n_d=1.835, ν_d=38.0) in a sequence of A, B, C, D and A as border lines in x-y orthogonal coordinates shown in FIG. 1, in which X-axis is the Abbe number (ν_d) and Y-axis is the refractive index (n_d), the area including the border lines: and the optical glass comprising:

0.1 to 8 mass% of SiO_2;

5 to less than 20 mass% of B_2O_3;

15 to 50 mass% of La_2O_3;

0.1 to 30 mass% Gd_2O_3,

more than 10 to 25 mass% of Ta_2O_5; and

more than 0.5 to less than 3 mass% of Li_2O;

and

0 to 10 mass% of GeO_2 and/or

0 to 8 mass% of Nb_2O_5,

where a total content of Gd_2O_3, GeO_2 and Nb_2O_5 is more than 10 mass% to 30 mass%;

and/or

0 to 5 mass% of Yb_2O_3; and/or

0 to 1 mass% of TiO_2; and/or

0 to 8 mass% of ZrO_2; and/or

0 to 10 mass% of WO_3; and/or

0 to 15 mass% of ZnO; and/or

0 to 5 mass% of RO,

where RO is one or more kinds of oxides selected from CaO, SrO and BaO;

0 to 1 mass% of Sb_2O_3; and/or

0 to less than 0.5 mass% of Lu_2O_3; and

0.1 to 6 mass% in the total content of fluorides of above-described metal elements as F element with which a part or all of one or more kinds of oxides of above-described metal elements are substituted;

wherein the optical glass is free from cadmium, thorium, Y_2O_3, P_2O_5 and TeO_2, and

the optical glass has a transition temperature (Tg) of 550 to 650°C.

16. The optical glass as claimed in claim 15, comprising 0.1 to less than 5.5 mass% of SiO_2.

17. The optical glass as claimed in claim 15, comprising more than 1 to less than 3 mass% of Li_2O.

18. The optical glass as claimed in claim 15, having the refractive index (n_d) of less than 1.875.

19. The optical glass as claimed in claim 15, having the refractive index (n_d) of 1.875 or more.

20. The optical glass as claimed in claim 15, having the refractive index (n_d) of more than 1.85.

21. The optical glass as claimed in claim 15, having the Abbe number (ν_d) of less than 39.5.

22. The optical glass as claimed in claim 15, having the Abbe number (ν_d) of 39.5 or more.

23. The optical glass as claimed in claim 15, having the transition temperature (Tg) of 640°C or less.

24. The optical glass as claimed in claim 15, having the transition temperature (Tg) of 630°C or less.

25. The optical glass as claimed in claim 16, comprising more than 1 to less than 3 mass% of Li_2O.

26. The optical glass as claimed in claim 18, having the Abbe number (ν_d) of 39.5 or more.

27. The optical glass as claimed in claim 26, having the refractive index (n_d) of more than 1.85.

28. The optical glass as claimed in claim 19,

having the Abbe number (ν_d) of less than 39.5.